



**Mining  
Form  
MR-500**

**S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
BUREAU OF LAND AND WASTE MANAGEMENT  
DIVISION OF MINING AND SOLID WASTE PERMITTING  
2600 Bull Street, Columbia, SC 29201  
Telephone Number: (803) 896-4261 Fax Number: (803) 896-4001**

**RECLAMATION PLAN  
DHEC FORM 500 DATE VERSION ADOPTED 7/1/94**

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As required in Section 48-20-90 of the South Carolina Mining Act, "An operator shall submit with his application for an operating permit a proposed reclamation plan. The reclamation plan for an operating permit only must be furnished to the local soil and water conservation district in which the mining operation is to be conducted. The plan must include as a minimum each of the elements specified in the definition of 'reclamation plan' in Section 48-20-40 and information required by the department. The reclamation plan must provide that reclamation activities, particularly those relating to control of erosion, to the extent feasible, must be conducted simultaneously with mining operations and be initiated at the earliest practicable time after completion or termination of mining on a segment of the permitted land. The plan must provide that reclamation activities must be completed within two years after completion or termination of mining on each segment of the area for which an operation permit is requested unless a longer period specifically is permitted by the department."  
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SEP 29 2009

DIVISION OF MINING &  
SOLID WASTE MANAGEMENT  
BL&WM

**I. APPLICANT INFORMATION**

1. Name of Company: Sloan Construction Company, Inc.

2. Name of Proposed Mine: Blacksburg Quarry County: Cherokee

3. Home Office Address: 250 Plemmons Road (864) 416-0200

(Street and P.O. Box)

Duncan

SC

29334-0000

(Telephone No.)

864-416-0201

(City)

(State)

(Zip Code)

(Fax No.)

4. Local Office Address: to come

(Street and P.O. Box)

to come

SC

(Telephone No.)

(City)

(State)

(Zip Code)

(Fax No.)

5. Name of company personnel and their title to be the contact for official business and correspondence: Jesse Rickmon, Mining Engineer

6. Location of Mine: Interstate 85

State or County Hwy No.

Blacksburg

Nearest Town or City

**II. ENVIRONMENTAL PROTECTION**

1. Describe practices to protect adjacent resources such as roads, wildlife areas, woodland, cropland and others during mining and reclamation.

The permitted boundary will be delineated by fence except along the RR to the SW. Mining & reclamation will be inset 25' of the property boundary. Sediment & erosion will be controlled by proper sloping in conjunction with seeding & silt fencing. Wet suppression will be used on roads & in production facilities to limit dust. Paving & washing of internal roads will eliminate tracking of material onto external roads.

2. Describe proposed methods to limit significant adverse effects on adjacent surface water and groundwater resources.

All groundwater and surface runoff collected or carried across disturbed acres within the permitted area will be captured and contained through diversion ditches into settling ponds before discharging from the site. Water exiting the property will be sampled and tested in accordance with state and federal requirements.

3. Describe proposed methods to limit significant adverse effects on known significant cultural or historic sites within the proposed permitted area.

Any significant or historic sites located within the proposed permitted area will be delineated and isolated with offsets for preservation where applicable. Areas not applicable to be isolated will be mitigated.

4. Describe method to prevent or eliminate conditions that could be hazardous to animal or fish life in or adjacent to the permitted area.

The primary method by which hazardous conditions to wildlife and fish life will be eliminated is through separation of operation and environment. The perimeter of the property will be encompassed by fence as to deter wildlife from entering and all crests of high-walls and ponds will be contoured and sloped as to address sudden changes in elevation. All waters will be collected and settled out, as well as monitored to prevent contamination of adjacent water sources.

5. Describe how applicant will comply with State air quality and water quality standards as established by the S.C. Department of Health and Environmental Control.

Will submit a storm water NOI subsequent to being authorized by a NPDES permit. A storm water protection plan will be created & implemented to define the means of collection & containment of storm water across disturbed acreage & the method of sampling & testing to be conducted. Will submit an emissions inventory in the process of application for an Air Quality Permit. Upon receipt of AQ permit & startup of operation an opacity reading will be conducted to insure compliance.

### III. RECLAMATION OF AFFECTED AREA

6. State useful purpose(s) the affected land is being proposed for reclamation. More than one purpose may be checked, but information should be submitted to support the feasibility for each proposed purpose.

- |   |  |
|---|--|
| a. Lake or pond <input checked="" type="checkbox"/> PIT PROPOSED LAKE                     | f. Grassland <input type="checkbox"/>  |
| b. Agriculture <input checked="" type="checkbox"/> PROCESSING AREA AND OVERBURDEN STORAGE | g. Recreation <input type="checkbox"/> |
| c. Woodlands <input type="checkbox"/>   | h. Wetlands <input type="checkbox"/>   |
| d. Residential <input type="checkbox"/>   | i. Park <input type="checkbox"/>       |
| e. Commercial <input type="checkbox"/>  | j. Other <input type="checkbox"/>      |

7. State the final maximum surface gradient(s) (slope) in soil, sand, or other unconsolidated materials on reclaimed land. Surface gradients steeper than 3H:1V (18 degrees or 33 percent) may be required to submit geotechnical data and studies to demonstrate that the steeper slopes will remain stable following final reclamation.

Three horizontal to one vertical.

8. How will the final slopes in unconsolidated material be accomplished? If the slope will be by backfilling, demonstrate that there is adequate material to accomplish the stated final gradient. If gradient is to be achieved by bringing in material from outside the permitted area, state the nature of the material and approximate quantities. If the gradient is to be achieved by grading, show that there is adequate area for grading to achieve gradient (i.e., adequate distance between the property line and edge of highwall). Operator should show calculations or other appropriate information to demonstrate that there is adequate materials in backfilling and grading to meet the requirements for final slope.

Final sloping of unconsolidated material will be accomplished by both grading and backfilling practices. The final slopes will be walked in with track equipment prior to re-vegetation. A detail of both types of sloping is attached as drawing 'Reclamation Detail.' This drawing also displays calculations of required dirt volumes for slopes as well as available material created during the stripping process. ATTACHMENT A-1

9. Describe the plan for revegetation or other surface treatment of affected area(s). The revegetation plan shall include but not be limited to the following: (a) planned soil test; (b) site preparation and fertilization; (c) seed or plant selection; (d) rate of seeding or amount of planting per acre; (e) maintenance.

All disturbed areas and slopes will be graded and roughed for maximum seed retention. Slopes will be seeded with lespedeza and lovegrass blend at 50 lb./5 lb. per acre. Flats and frontage areas will be seeded with bermuda/fescue/millet or rye at 25/50/10 lbs. per acre. Areas will be maintained through inspection, reseeding, and general upkeep.

10. Provide, as a separate document, a closure plan of the mine and permitted facilities to prevent a release of contaminants from being harmful to the environment. A closure plan is not necessary for all mines, but is required where the possibility exists for (a) acid rock drainage; (b) where the National Pollutant Discharge Elimination Systems (NPDES) Permit has discharge limitation parameters other than pH and Total Suspended Solids (TSS); (c) chemically treated tailings or stockpiles (excludes fertilizer or lime for revegetation purposes).

n/a

11. Method of control of contaminants and disposal of mine waste soil, rock, mineral, scrap, tailings, slimes, and other material directly connected with the mining, cleaning, and preparation of mineral substances mined and includes all waste materials deposited on or in the permit area from any source.

All natural materials that are considered waste products from mining, cleaning and preparation of aggregate stone will be deposited in a designated fill located on the reclamation map. This fill will be designed to prevent the build up and collection of surface water and sloped to minimize erosion. All water and sediment from the fill will be collected in a sediment pond also located on the reclamation map. A cross section of the fill design is shown as Figure 3 on the 'Reclamation Detail' drawing.

12. Method of reclaiming settling and/or sediment ponds.

All settling and sediment ponds will be reclaimed by first draining the water from the ponds. The sediment will then be dredged from the ponds and deposited in the overburden/waste storage area. The sides will be contoured to the natural terrain and filling will be conducted where necessary. The final step of reclamation of the ponds will be re-vegetation.

13. Describe method of restoration or establishment of stream channels, stream banks and site drainage to a condition minimizing erosion, siltation and other pollution.

Upon completion of mining, drainage channels will be designed to collect and channel site drainage back to original natural discharge points. Drainage channels will be constructed to have a drainage slope of no more than 2 foot drop per 100 linear feet of travel. Channel beds will be lined with rip rap or grass mats to minimize erosion.

14. What are the maintenance plans to insure that the reclamation practices established on the affected land will not deteriorate before released by the Department?

Periodic inspections will be conducted of reclaimed areas. Necessary repairs such as reseeding, resloping, and reestablishment of drainage will be corrected in a timely manner and in accordance with SC Mining Regulations.

15. For final reclamation, submit information about practices to provide for safety to persons and to adjoining property in all excavations. Identify areas of potential danger (vertical walls, unstable slopes, unstable surface on clay slimes, etc.) and provide appropriate safety provisions. These provisions can include but are not limited to setbacks, fencing,

The permitted property will be delineated by an installed fence except along the railroad on the southwestern side of the property. All activity will be inset 25 feet from this boundary. All benches within the quarry will be terraced to stop falling material. The edge of the pit will be sloped at a final slope of 3H: 1V to a minimum 10 foot shelf at the crest.

16. What provisions will be taken to prevent noxious, odious, or foul pools of water from collecting and remaining on the mined area? For mines to be reclaimed as lakes or ponds, provide supporting information that a minimum water depth of four (4) feet on at least fifty percent (50%) of the pond surface area can be maintained.

All disturbed acreage within the permitted boundary will be graded and contoured to prevent standing water from collecting during operation as well as prior to completion of final reclamation. The pit, being reclaimed as a lake, will have an average depth of 350 feet with minimum depths of 40 feet. All other ponds will be reclaimed by drain, dredge, fill, contour and seeding.

17. Identify any structures (e.g. buildings, roads) that are proposed to remain as part of final reclamation. Provide justification for leaving any structures.

A 1,500 foot paved entrance road will remain after final reclamation of the disturbed acreage. This structure will be for access to the property only. The fence that encompasses the property will also remain for added safety.

18. Attach **two (2)** copies of a map of the area (referred to as the RECLAMATION MAP) that shows the reclamation practices and conservation practices to be implemented. The following should be shown: ATTACHMENT B-1

- A. The outline of the proposed final limits of the excavation during the number of years for which the permit is requested.
- B. The approximate final surface gradient(s) and contour(s) of the area to be reclaimed. This would include the sides and bottoms of mines reclaimed ponds and lakes.
- C. The outline of the tailings disposal area.
- D. The outline of disposal areas for spoil and refuse (exclusive of tailings ponds).
- E. The approximate location of the mean shore line of any impoundment or water body and inlet and/or outlet structures which will remain upon final reclamation.
- F. The approximate locations of access roads, haul roads, ramps or buildings which will remain upon final reclamation.
- G. The approximate locations of various vegetative treatments.
- H. The proposed locations of re-established streams, ditches or drainage channels to provide for site drainage.
- I. The proposed locations of diversions, terraces, silt fences, brush barriers or other Best Management Practices to be used for preventing or controlling erosion and off-site siltation.
- J. Proposed locations of the measures to provide safety to persons and adjoining property.
- K. Segments of the mine that can be mined and reclaimed as an ongoing basis.
- L. The boundaries of the permitted area.
- M. The boundaries of the affected area for the anticipated life of the mine.
- N. The boundaries of the 100-year floodplain, where appropriate.
- O. Identify sections of mine where the final surface gradient will be achieved by grading and/or backfilling.
- P. A legend showing the name of the applicant, the name of the proposed mine, the north arrow, the county, the scale, the date of preparation and the name and title of the person who prepared the map.

THE REQUIRED RECLAMATION MAP SHALL HAVE A NEAT, LEGIBLE APPEARANCE AND BE OF SUFFICIENT SCALE TO CLEARLY SHOW THE REQUIRED INFORMATION LISTED ABOVE. THE BASE FOR THE MAP SHALL BE EITHER A SPECIALLY PREPARED LINE DRAWING, AERIAL PHOTOGRAPH, ENLARGED USGS TOPOGRAPHIC MAP OR A RECENTLY PREPARED PLAT. RECLAMATION MAP SHOULD BE THE SAME SCALE USED FOR THE SITE MAP.

#### IV. SCHEDULE FOR IMPLEMENTATION OF CONSERVATION AND RECLAMATION PRACTICES

19. As stated in Section 48-20-90 of the S.C. Mining Act, reclamation activities, to the extent feasible, must be conducted simultaneously with mining operations. Identify which areas or segments of the mine are not feasible to reclaim simultaneously with mining. Provide reasons why reclamation can not proceed simultaneously with mining in these areas.

Haulage routes, the processing facility, support buildings, stockpiles & ponds will not be reclaimed simultaneously with mining as these items will be utilized for the number of years the permit is requested. All other areas of the mine will be reclaimed simultaneously with mining.

20. Section 48-20-40(16)(l) of the S.C. Mining Act requires a "time schedule, including the anticipated years for completion of reclamation by segments." This time schedule should meet the requirements of Section 48-20-90 of the Mining Act.

### SCHEDULE FOR IMPLEMENTING CONSERVATION AND RECLAMATION PRACTICES

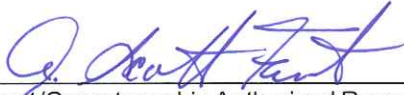
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\* Completed by the Department



YOU ARE NOTIFIED THAT:

- 1) You, the operator, must file an application to modify the reclamation plan in the event actual reclamation varies from the set forth hereinabove; and
- 2) If at any time it appears to the Department that the activities under the reclamation plan are failing to achieve the purposes and requirements of the S.C. Mining Act, the Department may modify the RECLAMATION PLAN in accordance to Section 48-20-150.



\_\_\_\_\_  
Signature of Applicant/Operator or his Authorized Representative

**A. Scott Fant, Secretary**

\_\_\_\_\_  
Printed Name of Applicant/Operator or his Authorized Representative

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

9/28/09

**Department Use Only**

Permit No.: \_\_\_\_\_ Date Application Approved: \_\_\_\_\_ Date Bond Rec'd: \_\_\_\_\_

Bond Amount: \_\_\_\_\_ Blanket or Single Bond: \_\_\_\_\_ Permit Issuance Date: \_\_\_\_\_

**ACTION TAKEN ON THIS RECLAMATION PLAN**

\_\_\_\_\_ Approved \_\_\_\_\_ Denied \_\_\_\_\_ Approved with Additional Terms and Conditions

By: \_\_\_\_\_  
DIVISION DIRECTOR

Date: \_\_\_\_\_